AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for inserting a given node into ring operations of an ATM ring, including:

operating the given node as a bypass for ATM traffic on the ring;

operating the given node as a pass through for the ATM traffic on other existing virtual path connections on the ring before a virtual path is established for the given node;

assigning to the given node one or more virtual paths to direct traffic to and from the given node over the ring;

communicating the virtual path assignment to other nodes on the ring to establish the assigned virtual path on the ring; and

providing to the given node connection information for virtual paths and virtual circuits on the ring.

2. (Original) The method of claim 1 wherein the step of providing connection information to the given node includes providing routing tables to the given node.

3. (Previously Presented) The method of claim 2 wherein the step of providing connection information further includes providing the information from a hub node to the given node.

4.	(Previously Presented)	The method of claim 3 wherein the step of providing connection information further includes:

providing an error checking code with the information, and

at the given node checking the information with the error checking code to determine that the information is correct.

5.	(Previously Presented)	The method of claim 1 wherein the step of assigning the virtual path to the given node further include

the given node requesting the assignment from a hub node, and

the hub node responding to the request with the assignment.

6.	(Previously Presented) The method of claim 1 wherein the step of communicating the vitual path assignment to other nodes includes updating routing tables maintained by the other nodes.

7.	(Previously Presented) The method of claim 1 wherein the step of communicating the virtual path assignment to other nodes includes providing to the other nodes call set up information for calls over the newly assigned virtual path.

8.   (Previously Presented) The method of claim 1 further including the steps of

establishing connections to and from the given node over the assigned

virtual path; and

tearing down connections over the assigned virtual path.

9.   (Previously Presented) The method of claim 8 wherein the step of

communicating the virtual path assignment to other nodes includes updating

routing tables maintained by the other nodes.

10.   (Original) The method of claim 9 further including updating the routing

tables with call set up and tear down information associated with the one or more

virtual paths assigned to the given node.

11.   (Original) The method of claim 1 further including the step of, at the given

node, shaping traffic over the virtual circuits associated with the established

connections on the ring.

12.   (Currently Amended) A method for removing a failed node from an ATM

ring, the method including:

determining, at a ring hub node, that a node has failed;

tearing down virtual circuit connections directed to or initiating from the

failed node;

tearing down virtual paths assigned to the failed node; and

providing instructions to other nodes on the ring to update ring topology information at the other nodes, the updated ring topology information indicating that the failed node is removed from the ring.

13.   (Currently Amended) The method of claim 12 wherein

~~the step of determining that a node has failed includes having a ring hub node determine the failure, and~~

the steps of tearing down the virtual circuit and virtual path connections are controlled by a hub node.

14.   (Previously Presented) A method for inserting a given node into ring operations of an ATM ring and removing a failed node from the ring operations, the method including:

operating the given node as a bypass for ATM traffic on the ring;

operating the given node as a pass through for the ATM traffic on existing connections on the ring before a virtual path is established for the given node;

assigning to the given node one or more virtual paths to direct traffic to and from the given node over the ring;

communicating the virtual path assignment to other nodes on the ring to establish the assigned virtual path on the ring; and

providing to the given node connection information for virtual paths and virtual circuits on the ring;

tearing down connections directed to and initiating from a failed node; and

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instructing non-failing nodes on the ring to update ring topology information.

15. (Original) The method of claim 14 wherein the step of providing connection information to the given nodes includes providing routing tables to the given node.

16. (Previously Presented) The method of claim 15 wherein the step of providing connection information further includes providing the information from a hub node to the given node.

17. (Previously Presented) The method of claim 15 wherein the step of providing connection information further includes

providing a error checking node with the information, and

at the given node checking the information with the error checking code to determine that the information is correct.

18. (Previously Presented) The method of claim 14 wherein the step of assigning the virtual path to the give node further includes

requesting, at the given node, the assignment from a hub node, and

responding to the request, at the hub node, with the assignment.

19.   (Previously Presented) The method of claim 14 wherein the step of communicating the virtual path assignment to other nodes includes updating routing tables maintained by the other nodes.

20.   (Currently Amended) The method of claim 1, further including:

establishing a connection for the given node with an ~~inter-ring~~ intra-ring management channel; and

exchanging pass through information between the given node and a hub node on the ring via the ~~inter-ring~~ intra-ring management channel, the pass through information being used to operate the given node as a pass through.

21.   (Currently Amended) The method of claim 12, wherein the determining step determines that a node has failed based on a failure by the failed node to communicate with ~~a~~ the ring hub node.

22.   (Previously Presented) The method of claim 14, further including:

detecting a failure with respect to the failed node in response to the failed node failing to communicate with a hub node.

23.   (Previously Presented) The method of claim 14, wherein said connections includes at least one of virtual paths and virtual circuit connections initiating from or destined to the failed node.

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24.   (Previously Presented) A ring network for conducting asynchronous transfer

mode (ATM) communications, comprising:

a plurality of ring nodes operably connected via a plurality of virtual paths,

each virtual path being used to direct traffic from an initiating ring node to a

destination ring node; and

a ring hub node configured to instruct a newly-inserted ring node to operate

as a pass through from ATM traffic via the virtual paths until one or more new

virtual paths are established for the newly-inserted ring node.

25.   (Previously Presented) The ring network of claim 24, wherein the ring hub

node is further configured to assign the new virtual paths to direct traffic to and

from the newly-inserted ring node.

26.   (Previously Presented) The ring network of claim 24, wherein the ring hub

node is further configured to provide connection information to the ring nodes, the

connection information corresponding to virtual paths and virtual circuits on the

ring network.

27.   (Previously Presented) The ring network of claim 24, wherein the ring hub

node is further configured to

detect a failure of one of the ring nodes; and

tear down, in response to the detected failure, connections on the ring

network directed to or initiating from the failed ring node.

28.　(Previously Presented) The ring network of claim 27, wherein the ring hub node is configured to detect the failure in response to the failed ring node failing to communicate with the ring hub node.

29.　(Previously Presented) The ring network of claim 24, wherein the ring hub node is further configured to provide instructions to the non-failing ring nodes to update ring topology information at the non-failing ring nodes, the updated topology information indicating that the failed ring node is removed from the ring network.

30.　(New) The method of claim 21, wherein at least some nodes in the ATM ring are configured to communicate with the ring hub node by periodically sending messages to the ring hub node over a dedicated channel, and

　　the determining step determines that a particular node has failed when the ring hub node does not receive one of the messages from the particular node over the dedicated channel within a predetermined time interval.

31.　(New) The method of claim 30, wherein the messages are OAM cells sent over a dedicated intra-ring management channel.

32.   (New) The method of claim 22, wherein at least some nodes in the ATM ring are configured to communicate with the ring hub node by periodically sending messages to the hub node over a dedicated channel, and

the detecting step detects a failure with respect to the failed node when the ring hub node does not receive one of the messages from the failed node over the dedicated channel within a predetermined time interval.

33.   (New) The method of claim 32, wherein the messages are OAM cells sent over a dedicated intra-ring management channel.

34.   (New) The method of claim 28, wherein at least some nodes in the ring network are configured to communicate with the ring hub node by periodically sending OAM cells to the hub node over a dedicated intra-ring management channel, and

the detecting step detects a failure with respect to the failed node when the ring hub node does not receive an OAM cells from the failed node over the dedicated intra-ring management channel within a predetermined time interval.